How to Write a World-Class Paper

….and get it successfully published

An Introduction to Scientific Publishing

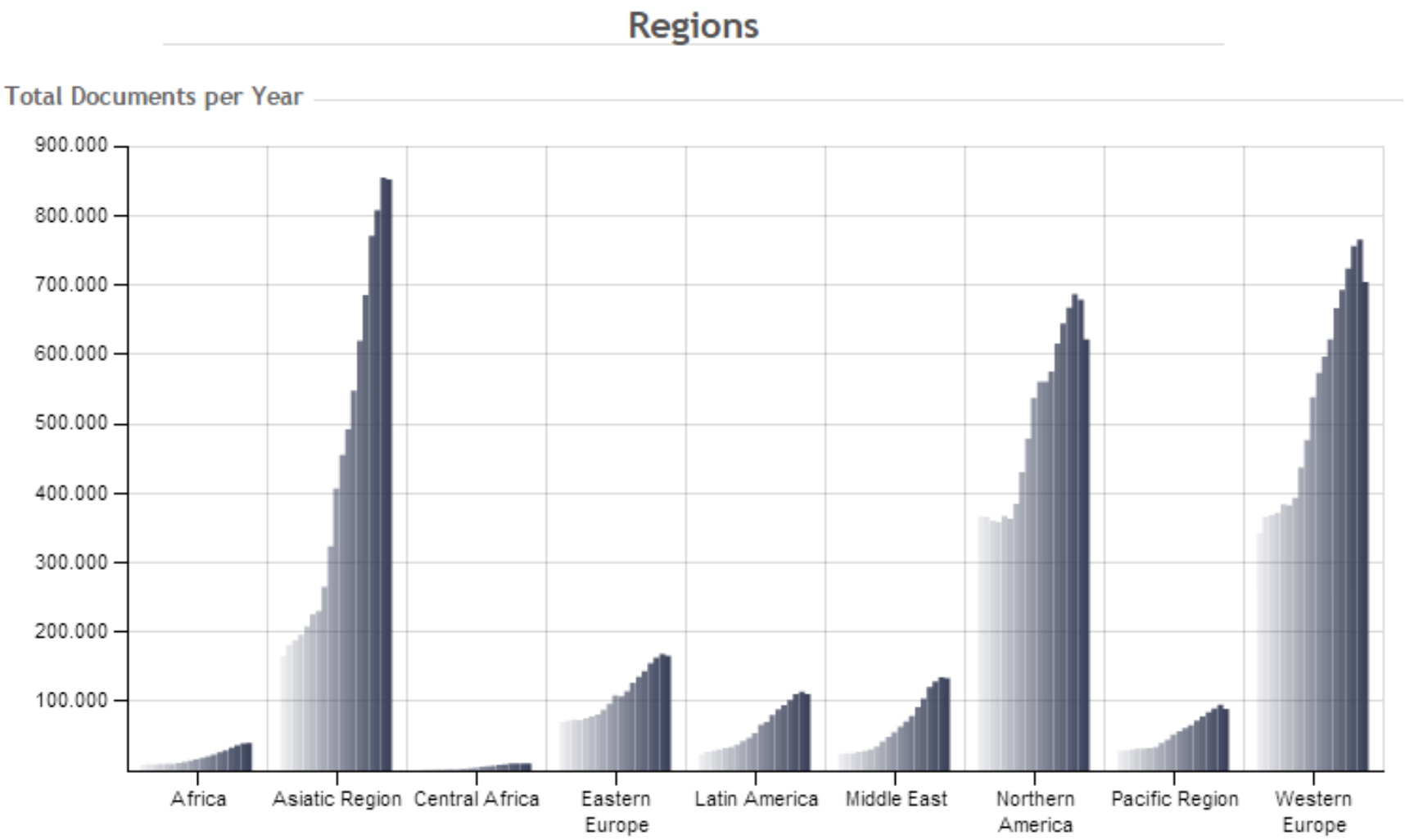
October 2015

Presented by David Sleeman

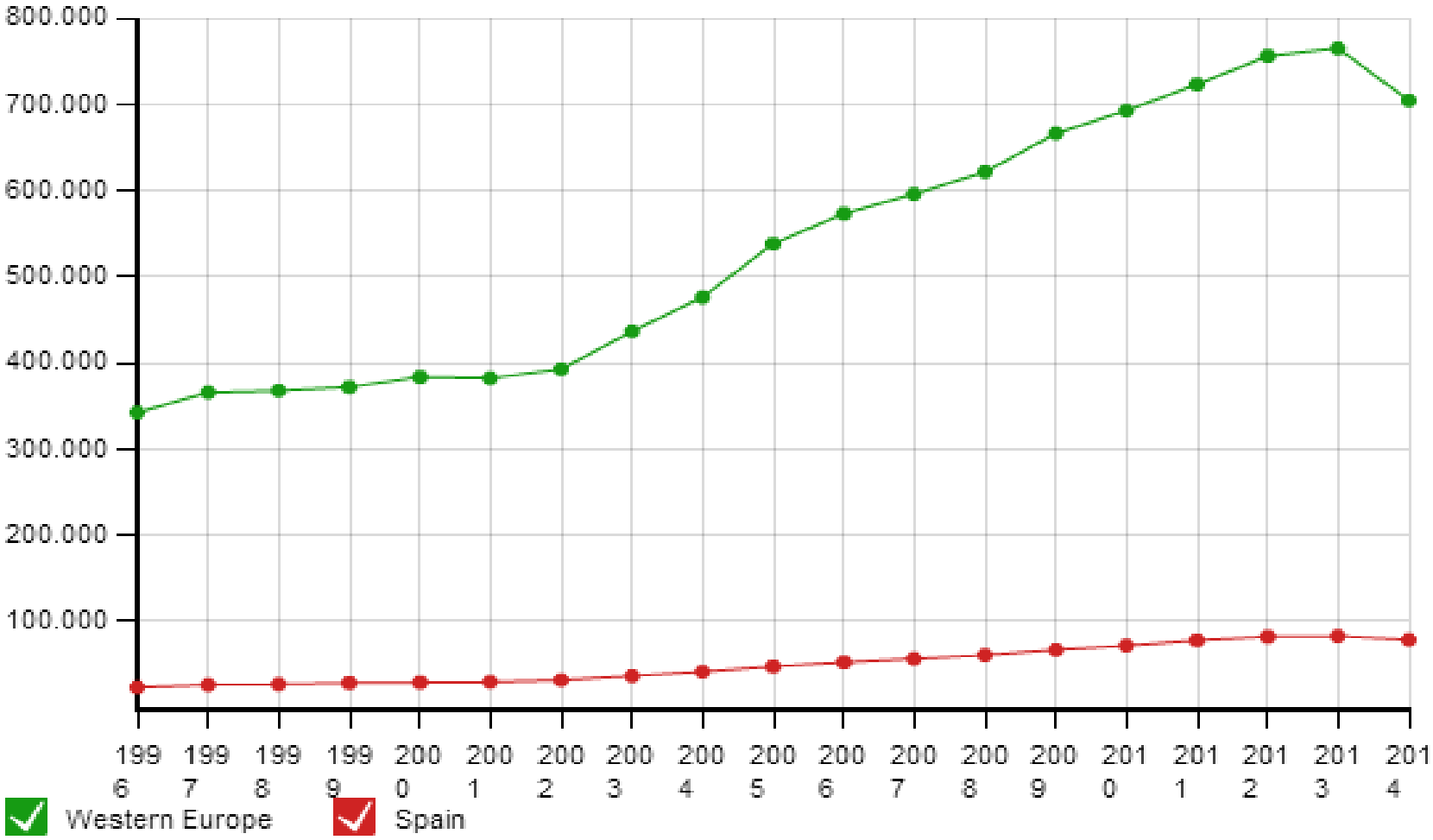
Executive Publisher

www.emeraldinsight.com

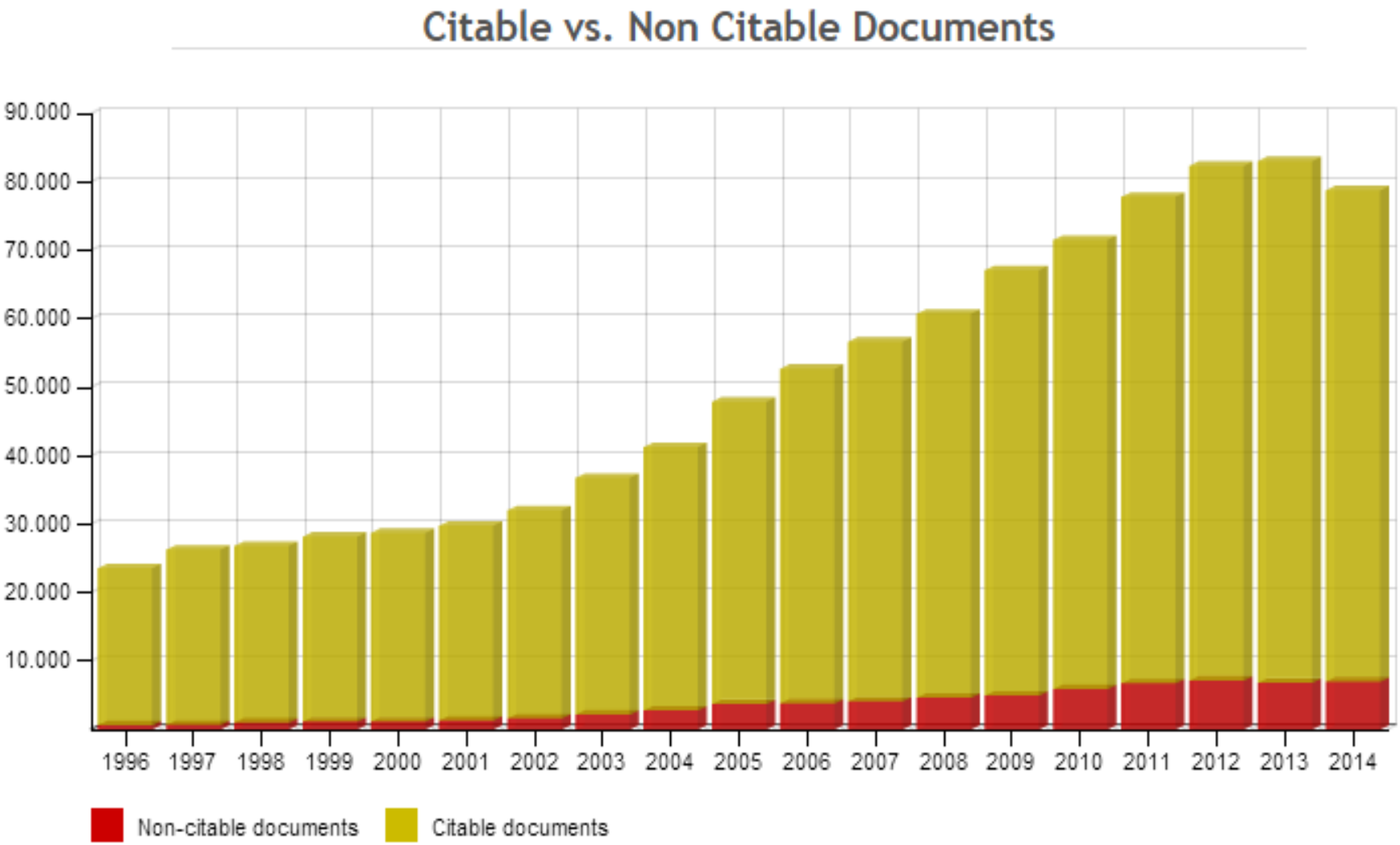
Global Published Peer Review Research from 1996



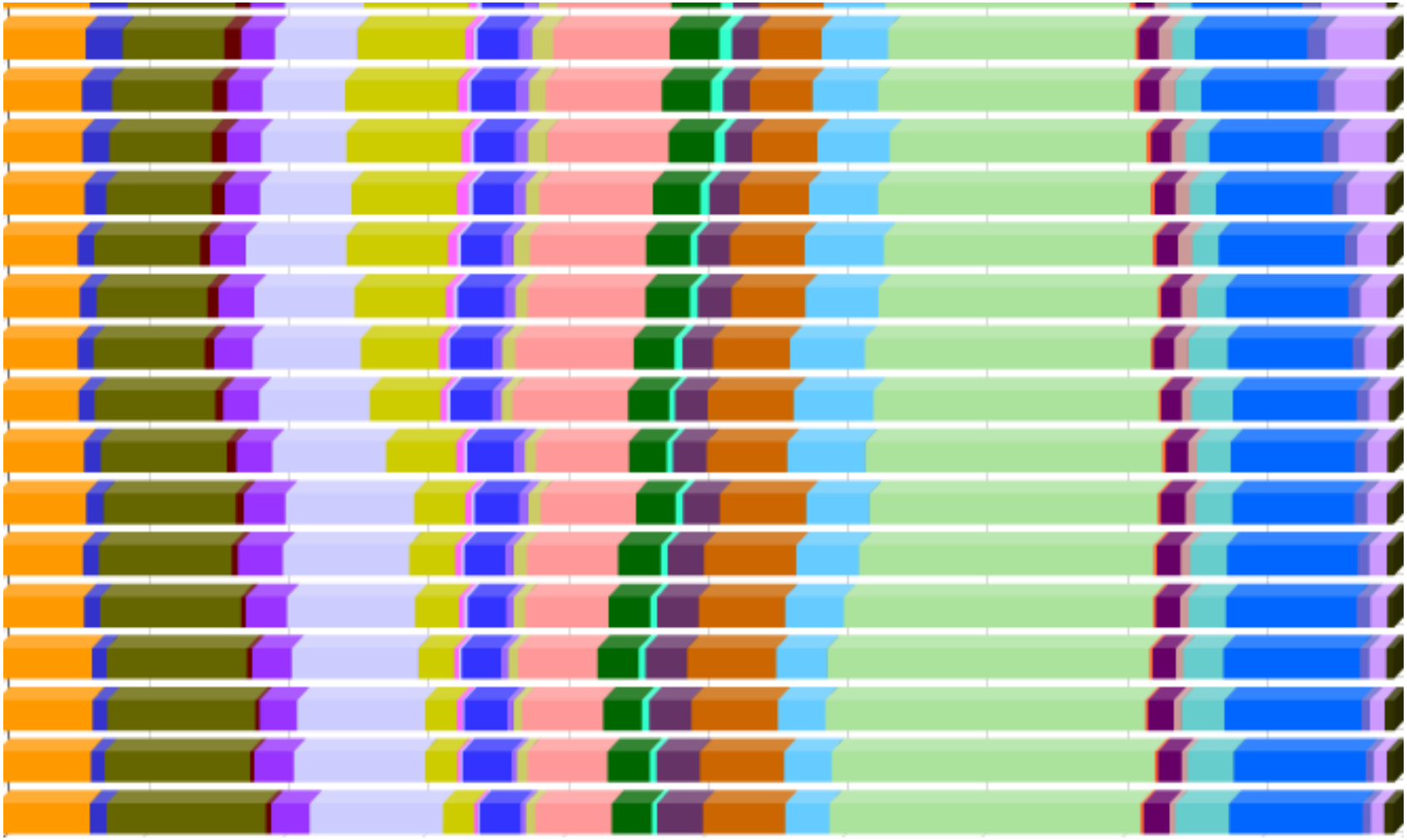
Published Peer Review Research in Spain 1996-2014 vs Europe



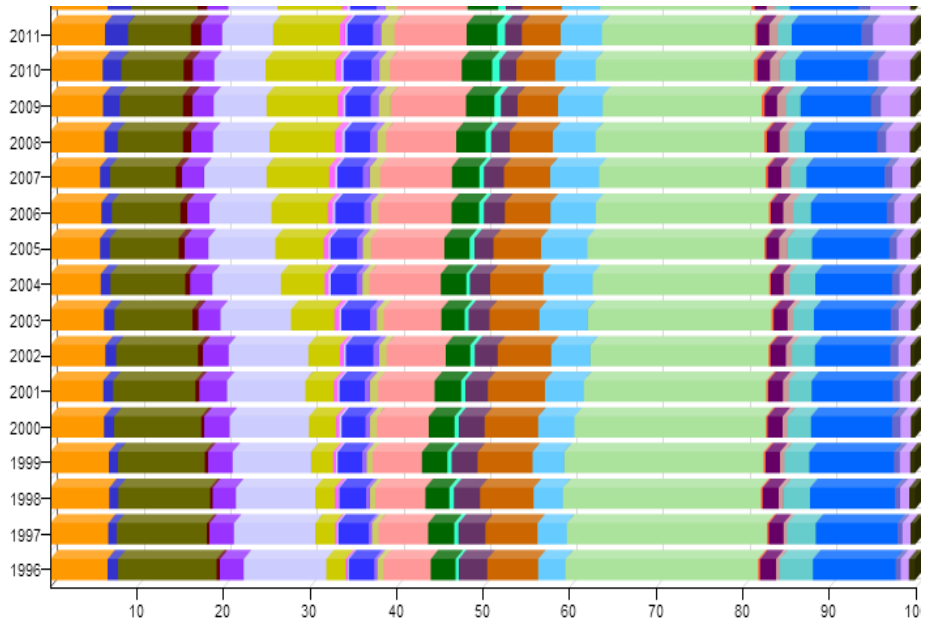
Peer Review Research in Spain

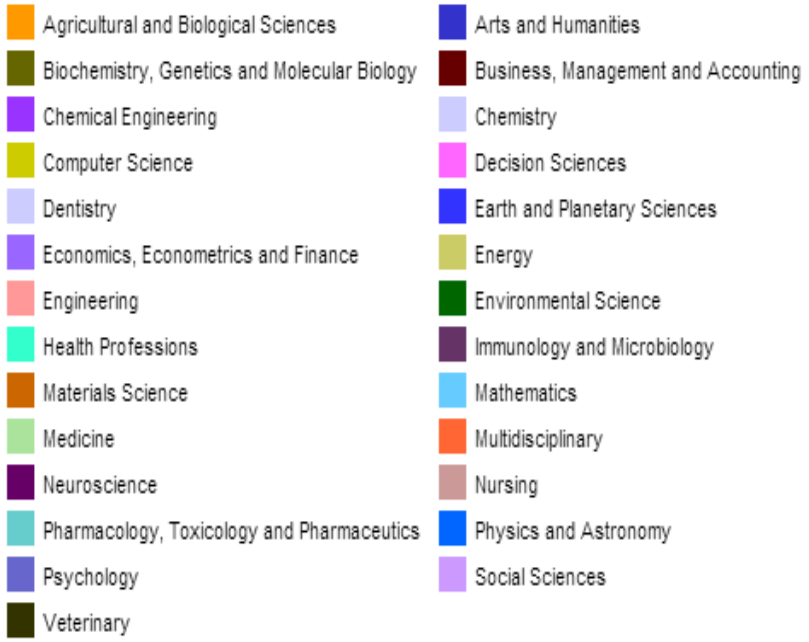


Peer Review Research in Spain



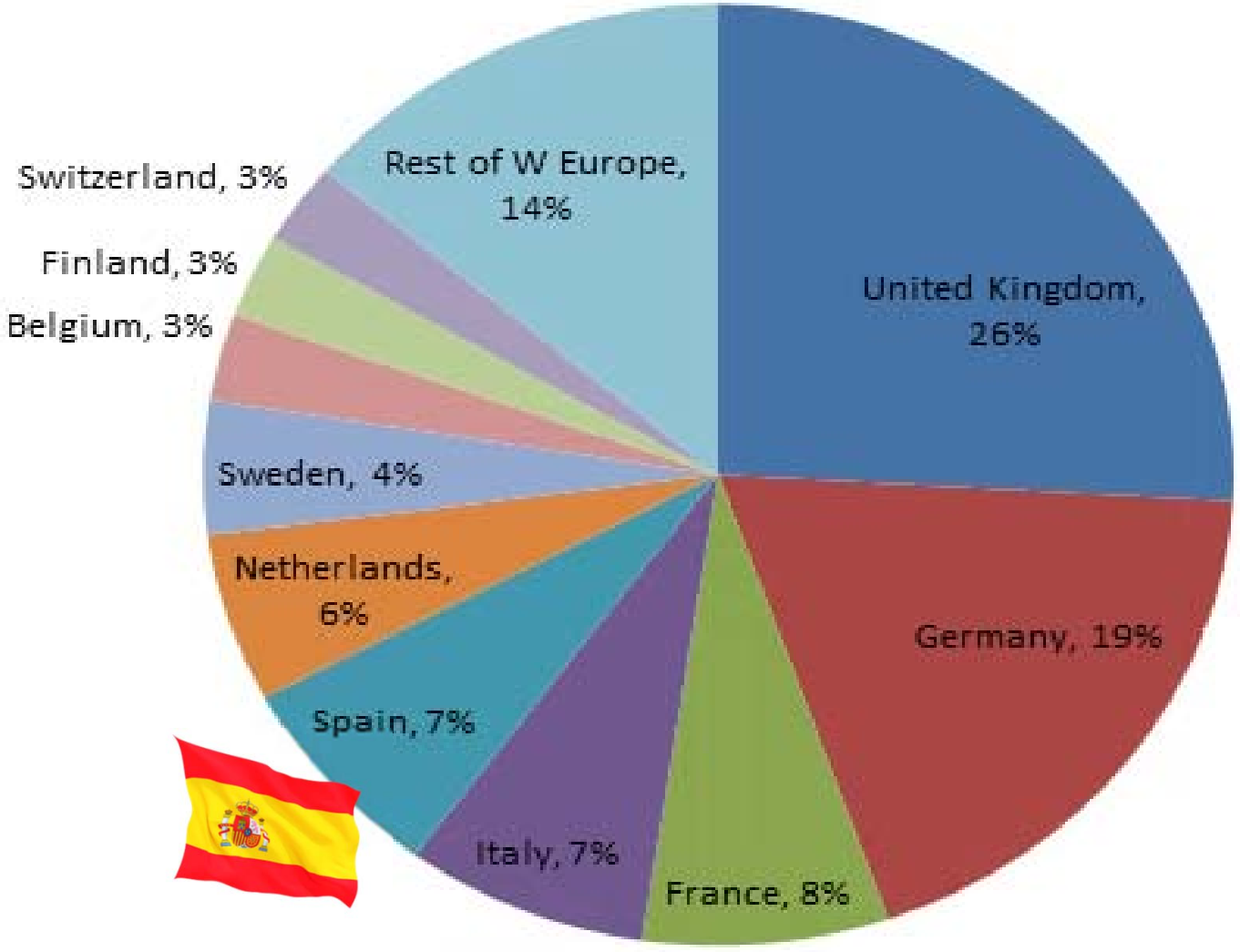
Peer Review Research in Spain





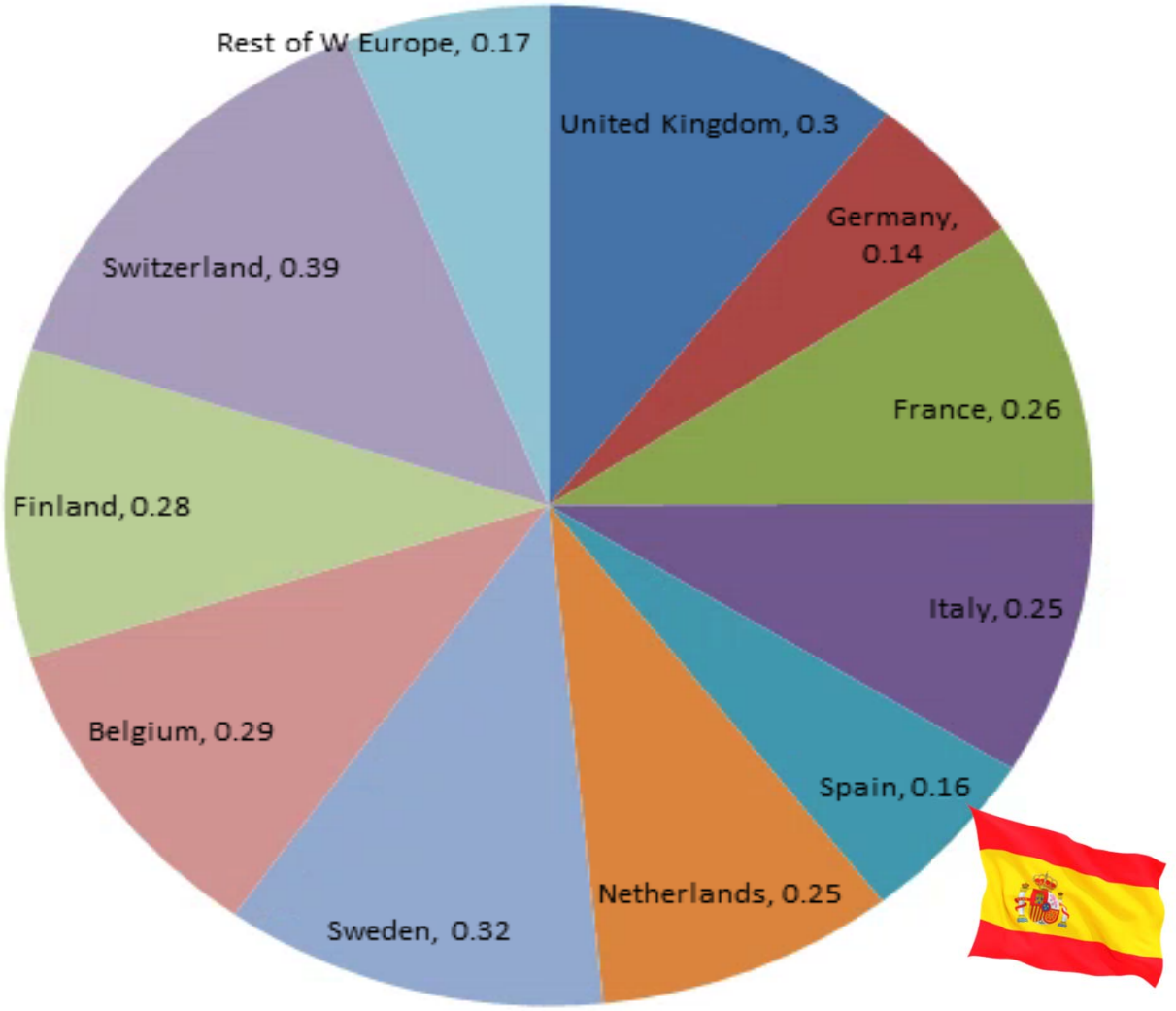
Business Management Research in Europe

Percentage of Peer-Review Documents Published in 2014 by Country

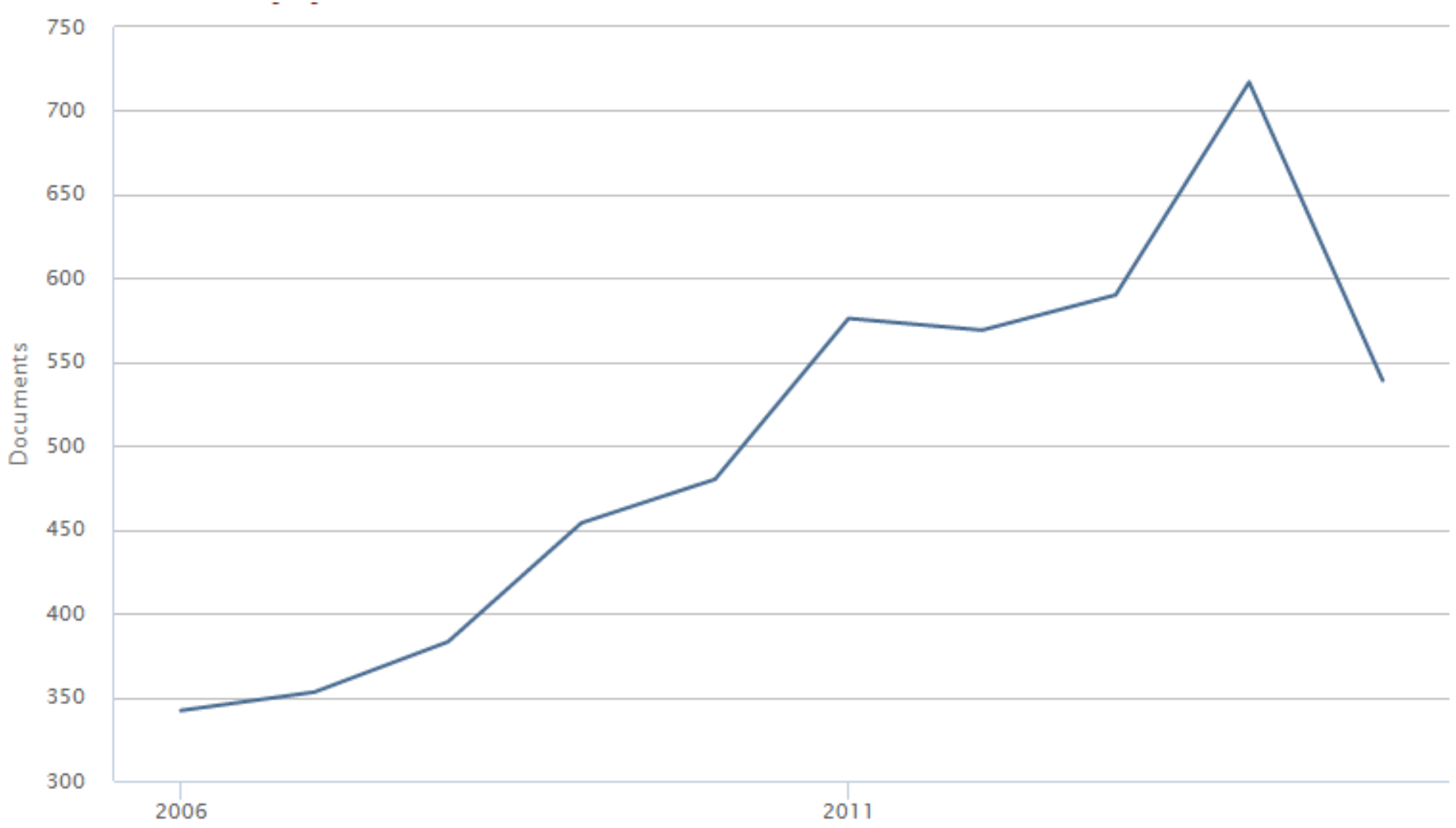


Business Management Research in Europe

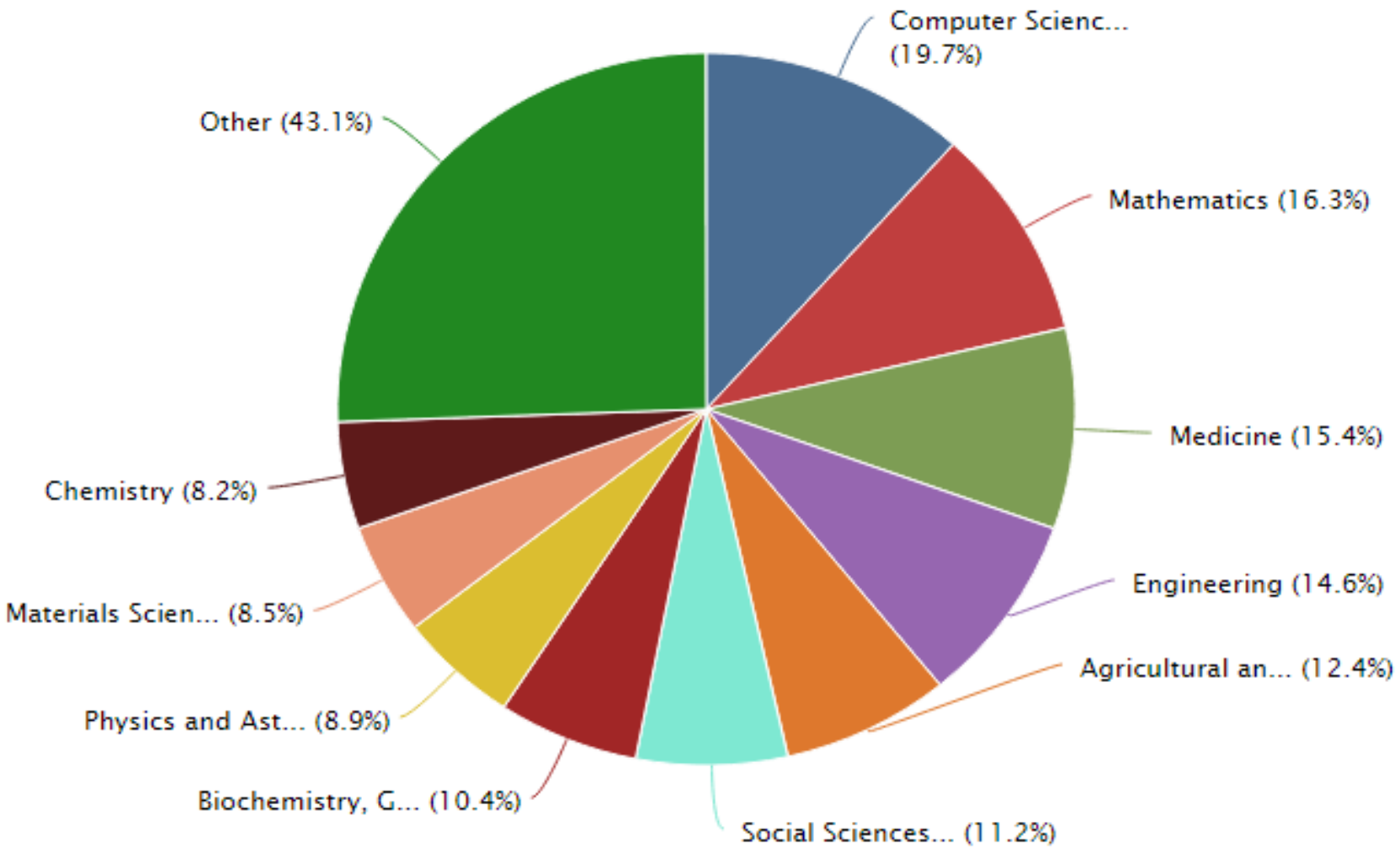
Average Number of Citations Per Published Document in 2014 by Country



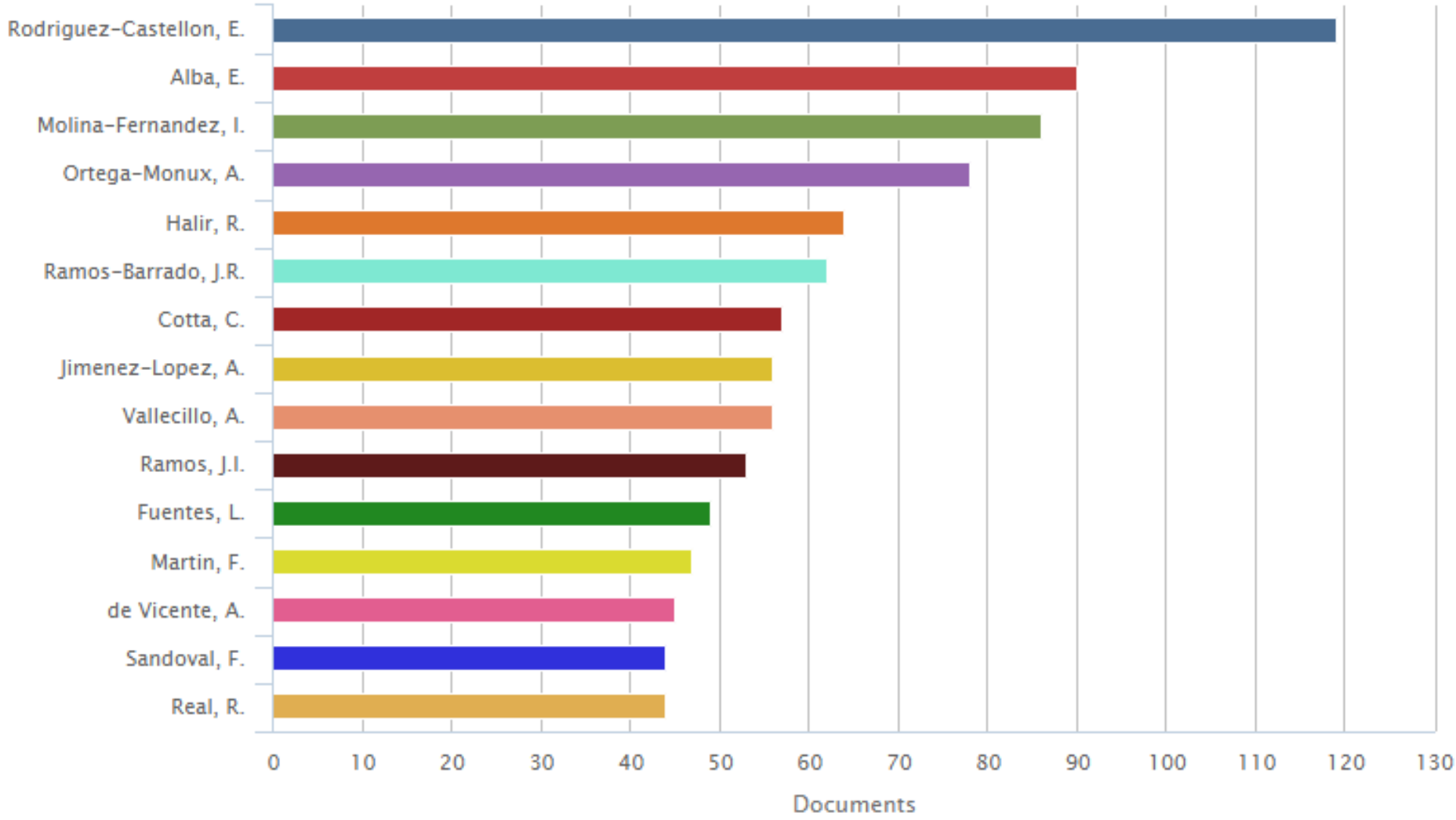
Growth of published research from Universidad de Málaga 2006-2015



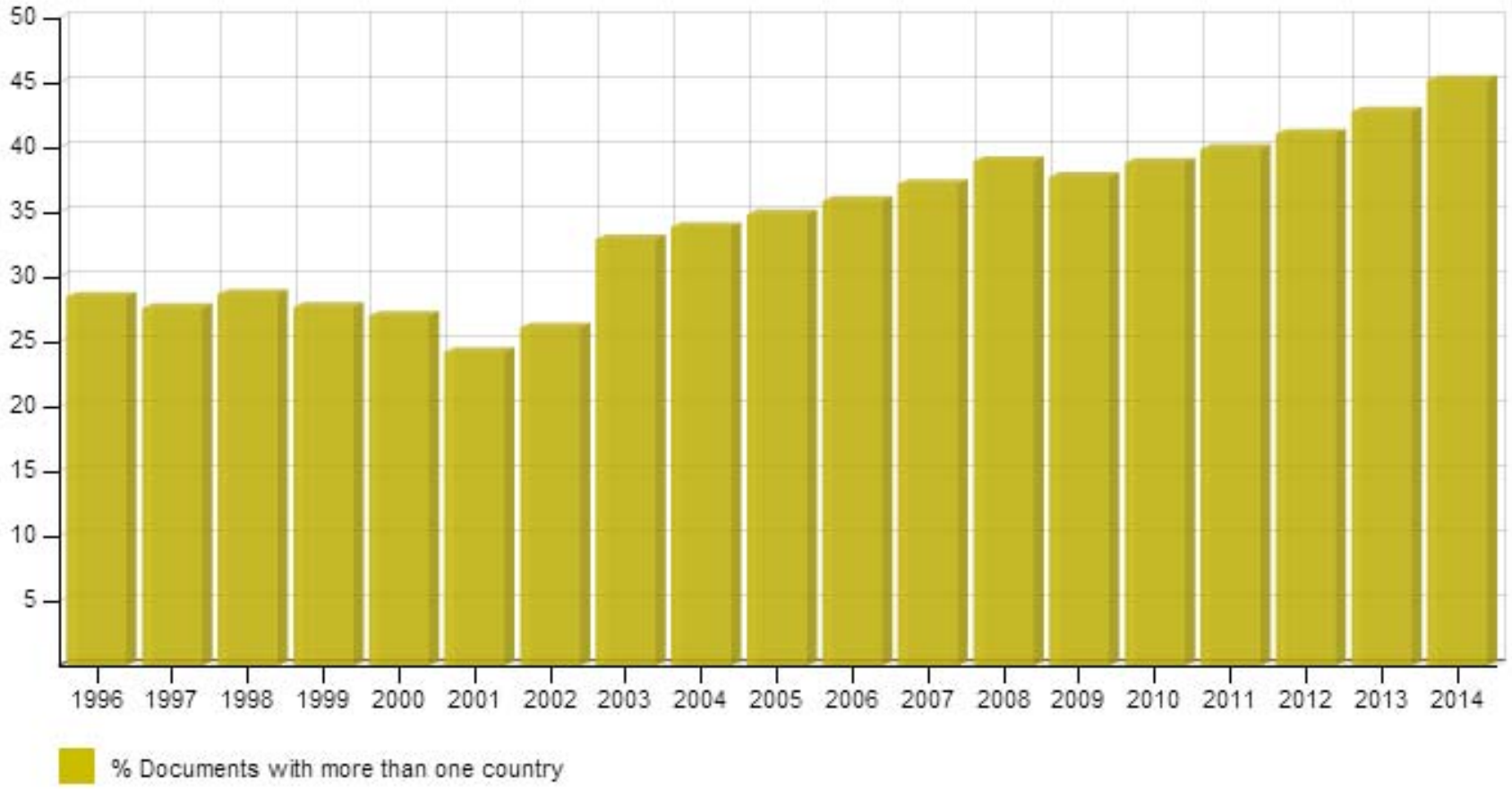
Published research from Universidad de Málaga 2006-2015 by subject area



Most published authors from Universidad de Málaga 2006-2015



Spain – International Collaboration



Printing and publishing –

A *brief* history …

Han dynasty

The earliest woodblock printing can be traced to China more than 2220 years ago.

11th Century

Koreans experiment with movable type, using clay, wood, bronze and iron.

Johannes Gutenberg generally recognised as the inventor of the printing press

1439

1969

Gary Starkweather American inventor of the laser printer

25th December 1990

Tim Berners-Lee – accredited with inventing the WWW

Why Publish?

Why Publish in Journals?

Your published paper…

- Is a **permanent** record of your work
- Appears in **print and electronically**
- Is **improved** via the double-blind peer review process
- Is actively **promoted** by the publisher
- Is **trustworthy** – material that has been published carries a QA stamp

Why Publish with Emerald?

- Articles are available to download via Emerald EarlyCite prior to official publication
- Receive 3 months free access to the journal upon publication
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- Annual Awards for Excellence
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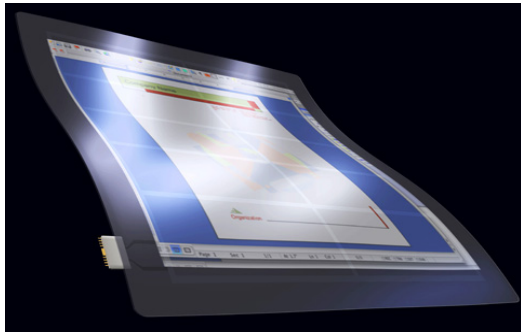
Research Cycle

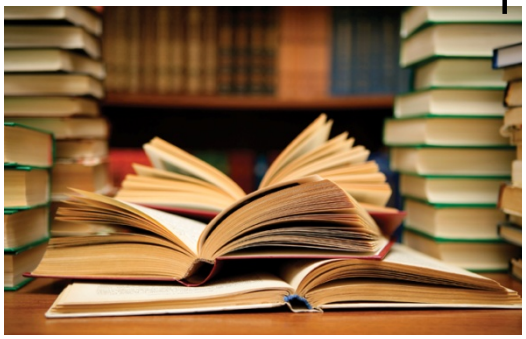
Funding

Research

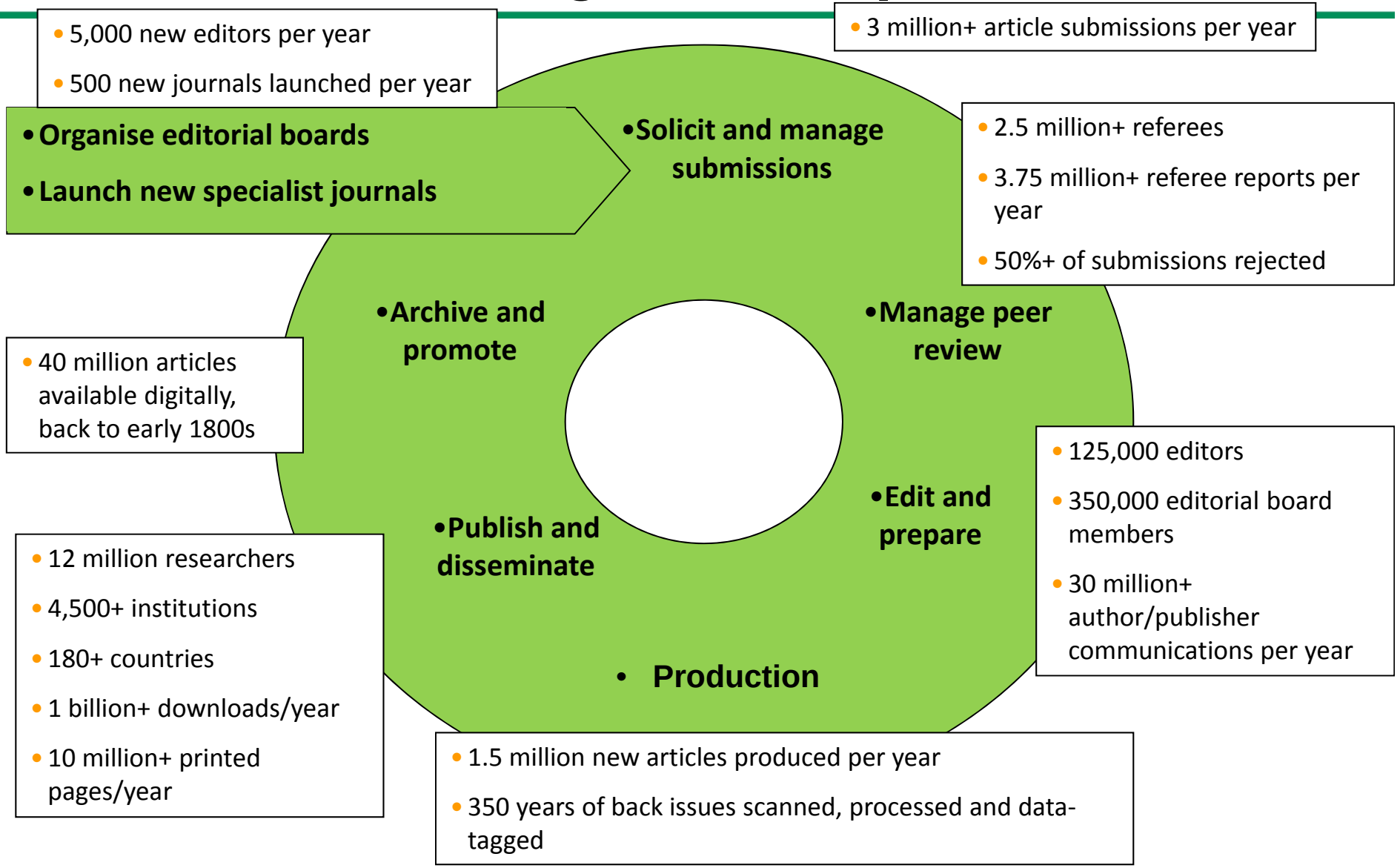
Analysis



Publication



Journal Publishing Landscape



Growth of scholarly journals


PHILOSOPHICAL
TRANSACTIONS:
GIVING SOME
ACCOMPT
OF THE PRESENT
Undertakings, Studies, and Labours
OF THE
INGENIOUS
IN MANY
CONSIDERABLE PARTS
OF THE
WORLD.
Vol. I.
For Anno 1665, and 1666.
In the SAVOY,
Printed by T. N. for John Martyn at the Bell, a little without Temple-Bar, and James Allestry in Duck-Lane,
Printers to the Royal Society.

- The most important 15,000 of these published over 1.3 million research articles in 2008.
- That's about one every 24 seconds.
- But each one takes about 30 minutes to read.

"This is truly the decade of the journal and one should seek to limit their number rather than to increase them, since there can be too many periodicals."

•*Neues medicinisches Wochenblatt fur Aerzte (1789)*

Why is it important to write a good paper?

Before submitting an article make sure it is

***as good as you can make it*.**

Not only because it makes YOUR life easier

- your chances of acceptance will be increased -

…but also the lives of the Editors and Reviewers

<u>Editors and Reviewers are already overloaded.</u>

Incomplete manuscripts create great frustration.

Can I publish this?????

- Have you done something new and interesting?
- Have you checked the latest results in the field?
- Have the findings been verified?
- Have the appropriate controls been performed?
- Do your findings tell a nice story or is the story incomplete?
- Is the work directly related to a current hot topic?
- Have you provided solutions to any difficult problems?

If all answers are “yes”, a good, strong manuscript is what is needed next

An international editor says:

“The following problems appear much too frequently”

- Submission of papers which are clearly out of scope
- Failure to format the paper according to the Guide for Authors
- Inappropriate (or no) suggested reviewers
- Inadequate response to reviewers
- Resubmission of rejected manuscripts without revision
- Inadequate standard of English

Language – Why is it important?

Correct use of language saves your editor and reviewers the trouble of guessing what you mean

Complaint from an editor:

“[This] paper fell well below my threshold. I refuse to spend time trying to understand what the author is trying to say. Besides, I really want to send a message that they can't submit garbage to us and expect us to fix it. My rule of thumb is that if there are more than 6 grammatical errors in the abstract, then I don't waste my time carefully reading the rest.”

Your article should be of value…

- **To yourself**

Your article is your passport to your professional community

- **To the research community**

A research study is meaningful only if it is clear/understood/reproducible….. and **USED**

What is a good manuscript?

- A good manuscript makes readers grasp the scientific significance **easily**
- It has a **clear, useful** and **exciting** message
- It is presented and constructed in a **logical** manner

FEBS 29081 FEBS Letters 579 (2005) 859–862

Minireview

Telomeres and telomerase: their mechanisms of action and the effects of altering their functions

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Department of Biochemistry and Biophysics, University of California, San Francisco, Box 2200, San Francisco, CA 94143-2200, USA

Received 22 October 2004; revised 25 October 2004; accepted 2 November 2004

Available online 26 November 2004

Edited by Gunnar von Heijne and Anders Liljas

Abstract The molecular features of telomeres and telomerase are conserved among most eukaryotes. How telomerase and telomeres function and how they interact to promote the chromosome-stabilizing properties of telomeres are discussed here. © 2004 Federation of European Biochemical Societies. Published by Elsevier B.V. All rights reserved.

Keywords: Telomere; Telomerase

1. Introduction

Telomeres, the DNA-protein complexes at the ends of

essential conserved domains, and the RNA component, TER. By copying a short template sequence within its intrinsic RNA moiety, telomerase synthesizes the telomeric DNA strand running 5′ to 3′ toward the distal end of the chromosome, thereby extending it. Regulated extension of the chromosomal DNA termini occurs to compensate for shortening that results from nuclease action and incomplete terminal DNA replication. A multi-component "telomere homeostasis" system prevents, on the one hand, the over-extension of telomeres. Protein–protein interactions among the telomere-associated proteins are important for this function, which acts in *cis* on a telomere [2].

Conversely, the telomeric homeostasis system acts to promote telomeric extension whenever a telomere becomes shortened, thereby keeping the tract of telomeric repeats within a

2009 Nobel Prize for Physiology or Medicine awarded to Elizabeth Blackburn

How to write a good manuscript:
Preparations before starting

Decide which type of paper is most appropriate

•Full articles/original articles/research articles

- Standard for disseminating completed research findings
- Typically 8-10 pages, 5 figures, 25 references
- Draft and submit the paper to appropriate journal
- Good way to build a scientific research career

•Review papers/perspectives

•Letters/rapid communications/short communications

How to write a good manuscript:
Preparations before starting

•Review papers/perspectives

- Critical synthesis of a specific research topic
- Typically 10+ pages, 5+ figures, 80 references
- Typically solicited by journal editors
- Good way to consolidate a scientific research career

•Letters/rapid communications/short communications

How to write a good manuscript:
Preparations before starting

•Letters/rapid communications/short communications

- **Letters / Rapid Communications / Short Communications** are usually published for the quick and early communication of significant and original advances; much shorter than full articles (usually strictly limited by the journal).
- there are also short communication or “letters” journals in some fields where authors can present short preliminary findings and then usually follow up with a full length paper

Journal Selection

Selection of a journal will depend on many factors in addition to journal metrics

“Never submit work to a journal that you do not read yourself. If you do, the chances are your work will be rejected. This is because you will not have the necessary ‘feel’ about what is appropriate. You won’t have the necessary sense of the ‘culture’. “(Prof Michael Curtis)

- The aims and scope of the journal
- The type of manuscript you have written (review, letter, articles)
- The specific subject area
- The significance of your work
- The prestige/quality of the journal
- The respect of the editors in the field
- The editorial and production speed of the journal
- The community and audience associated with the journal
- The coverage and distribution (regional, international)

Preparations before starting:

Read the Guide for Authors

Apply the Guide for Authors to your manuscript, even to the first draft (text layout, paper citation, nomenclature, figures and table, etc.). It will save your time, and the editor’s.

Constructing your article

Each section of a paper has a definite purpose

- Title
- Abstract
- Keywords

•Make them easy for indexing and searching (informative, attractive, effective)

- Main text (IMRAD)
  - **I**ntroduction
  - **M**ethods
  - **R**esults
  - **A**nd
  - **Di**scussions

•Journal space is precious. Make your article as brief as possible.

•If clarity can be achieved in *n* words, never use *n+ 1*

- Conclusion
- Acknowledgement
- References
- Supporting Materials

The Title

- **<u>Tell readers what your paper is all about</u>**
- Attract the reader’s attention
- Be specific
- Keep it informative and concise
- Avoid jargon and abbreviations

Title examples

Original Title	Revised	Remarks
Preliminary observations on the effect of Zn element on anticorrosion of zinc plating layer	Effect of Zn on anticorrosion of zinc plating layer	Long title distracts readers. Remove all redundancies such as "observations on", "the nature of", etc.
Action of antibiotics on bacteria	Inhibition of growth of mycobacterium tuberculosis by streptomycin	Titles should be specific. Think to yourself: "How will I search for this piece of information?" when you design the title.
Fabrication of carbon/CdS coaxial nanofibers displaying optical and electrical properties via electrospinning carbon	Electrospinning of carbon/CdS coaxial nanofibers with optical and electrical properties	"English needs help. The title is nonsense. All materials have properties of all varieties. You could examine my hair for its electrical and optical properties! You MUST be specific. I haven't read the paper but I suspect there is something special about these properties, otherwise why would you be reporting them?" *– the Editor-in-chief*

The Abstract

- This is the **advertisement** of your article. Make it interesting, and easy to be understood without reading the whole article.
- You must be **accurate** and **specific**!
- A clear abstract will strongly influence whether or not your work is further considered.
- Keep it as **brief** as possible!!!

Keywords

Used by indexing and abstracting services

- They are the labels of your manuscript.
- Use only established abbreviations (e.g. DNA)
- Check the “Guide for Authors”

Article Title	Keywords
“An experimental study on evacuated tube solar collector using supercritical CO2”	Solar collector; Supercritical CO2; Solar energy; Solar thermal utilization

Introduction – convince readers you know why your work is useful

Most of the previous investigations of emulsion stabilization by protein–polysaccharide conjugates have been concerned with model systems based on hydrocarbon oils or triglyceride oils under nearly ideal aqueous solution conditions. **The present paper aims to demonstrate the potential of this type of conjugate for making and stabilizing more challenging and complex emulsion systems of low pH and raised ionic strength**. The compositional conditions are focused here towards carbonated beverage systems based on an emulsified flavour oil in the presence of a commercial colouring agent.

- What is the problem?
- Are there any existing solutions?
- What are the main limitations?
- What do you hope to achieve?

Do NOT mix introduction with results, discussion and conclusion

Methods – how was the problem studied?

- Include detailed information so that a knowledgeable reader can reproduce the experiment
- However, use references and supplementary materials to indicate the previously published procedures

composite materials raised the thermal conductivities of materials compared to pure PEG materials, the thermal conductivity still need improved further.

In this paper, high conductivity polyethylene glycol (PEG)/Silica dioxide (SiO_2) composites with β-Aluminum nitride (β-ALN) as an additive were prepared. The structure and thermal properties of the blends were investigated by scanning electronic microscope (SEM), polarization optical microscope (POM), Fourier transformation infrared spectrophotometer (FTIR) and different scanning calorimeter (DSC). The conductivity of composites improved due to high conductivity of β-Aluminum nitride powder.

2. Experimental

2.1. Materials

Reagent grade polyethylene glycol with molecular weights (1000) was purchased from Guangzhou Chemical Agent Company (Guangzhou, China). Silicon gel was purchased from Guangzhou People's Chemical Company (Guangzhou, China). β-Aluminum nitride was obtained form Foshan Jingshi Company, imported from Japan. All the chemicals were analytical reagents and they don't need further purification.

2.2. Preparation of the composite PCMs

Firstly, Silicon gel and polyethylene glycol with the mass ratio 15/85 was dissolved in water while stirring for 12 h. After that, the prepared solutions were added with β-Aluminum nitride at different ratios ranging from 5 wt.% to 30 wt.% and then mixed at room temperature for 2 h Afterward, the mixed solution was put into an oven and heated at 100 °C for 24 h. Finally, the solid composite was obtained by heating in a vacuum oven at 70 °C for 24 h.

2.3. Characterization of the composite PCMs

The melting point and heat of fusion of the solid composite were determined using a differential scanning calorimeter (Perkin–Elmer DSC-2C) calibrated with an indium standard in the range from −30 °C to 120 °C. The velocity for scanning was at 10 °C/min. The surface morphology of sample was examined using a scanning electron microscope (Philips Scanning Electron Micro-

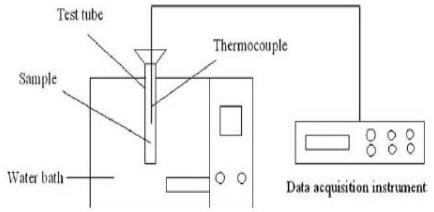


Fig. 2. Experimental instrument for heat storage and release test.

2.4. Experiment of heat storage and release performance

Fig. 2 shows the experimental instrument for heat storage and release test. Polyethylene glycol and the composite PCM sample were put into two identical tubes, respectively. One thermocouple was placed in the middle of each tube. Firstly, the two test tubes were put inside the water at the room temperature at the beginning. Later, the two tubes were put into the water bath at the constant temperature of 80 °C immediately. After the temperature of sample reached 80 °C for a while, the two tubes was put into the water at the same temperature again. The temperature measured by thermocouple was recorded automatically by using Agilent data acquisition instrument.

3. Results and discussion

3.1. Morphology characterization

Fig. 3 represents the SEM images of the composite PCM with no leakage of polyethylene glycol. From Fig. 3, it can be observed that the light area presents polyethylene glycol as phase change materials and the dark area represents silicon dioxide as supporting materials, respectively. Because silicon dioxide is a multi-pore material, polyethylene glycol was hold by porous supporting materials due to the capillary force and the surface tension force. The structure can be accounted for the great association of polyethylene glycol encapsulated by silicon dioxide, which helped to prevent leakage during the melting and freezing cycling. If there were no interaction between them, the composite PCM would not be able to keep the form.

Results

What have you found?

- Present essential/primary results
- Use sub-headings
- Use figures/illustrations
  - Graphs
  - Tables
  - Photos

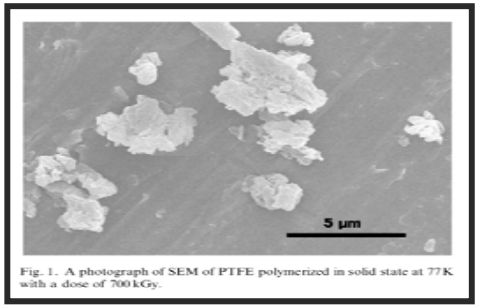


Fig. 1. A photograph of SEM of PTFE polymerized in solid state at 77 K with a dose of 700 kGy.

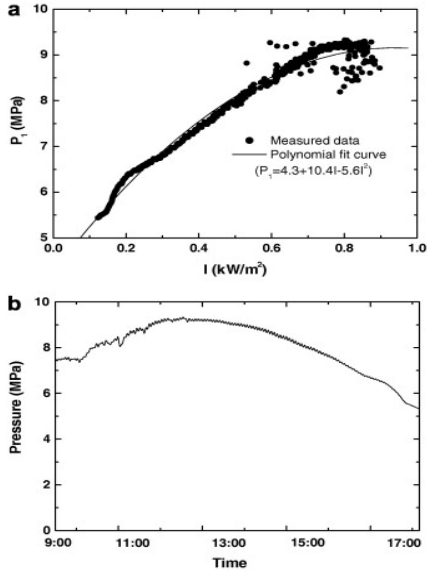


Fig. 5. Variations in the CO_2 pressure measured with the solar r the time (b).

Type of attack	Classical (%)	Pop (%)	Jazz (%)
Echo addition	0	0.10	0.27
Noise addition	1.20	1.42	1.60
Band equalization	2.31	2.50	2.73

Discussion – what the results mean

Describe

- How the results relate to the study's aims and hypotheses
- How the findings relate to those of other studies
- All possible interpretations of your findings
- Limitations of the study

Avoid

- Making "grand statements" that are not supported by the data
- Introducing new results or terms

Don't ignore work in disagreement with yours – confront it and convince the reader you are correct

Conclusions – how the work advances the field – don't repeat the abstract!

What have you shown?

What does it mean for the field?

Indicate possible applications and extensions

4. Conclusions

A high conductivity form-stable phase change material was p
red by blending polyethylene glycol, silica gel, and aluminum
tride powder. The composite PCMs exhibit desirable ther
properties including desirable heat latent and thermal cond

Thermal conductivity of the composite PCMs was i proved by using β-Aluminum nitride additive with great conductivity as a heat transfer promoter. The value of thermal conductivity changed from 0.3847 W m^{-1} K^{-1} to 0.7661 W m^{-1} K^{-1} with the increase of mass ratio of β-AlN from 5% to 30%. Correspondingly, the latent heat of various composite decreased in this case. However, the roperties of the composite PCM were not affected too much by e additive of high conductivity powder.

As the thermal conductivity enhanced by adding β-AlN additive, nd the heat latent of fusion keep suitable value, the composite PCMs onsidered as a promising PCMs candidate for energy storage.

•W. Wang et al. / Applied Energy 86 (2009) 1196–1200

Acknowledgements

- Acknowledge anyone who has helped you with the study, including:
  - Researchers who supplied materials or reagents, *e.g.* vectors or antibodies
  - Anyone who helped with the writing or English, or offered critical comments about the content
  - Anyone who provided technical help
- State why people have been acknowledged and ask their permission
- Acknowledge sources of funding, including any grant or reference numbers

References

Typically, there are more mistakes in the references than any other part of the manuscript.

It is one of the most annoying problems, and causes great headaches among editors…

- Cite the main scientific publications on which your work is based
- Do not inflate the manuscript with too many references
- Avoid excessive self-citations
- Avoid excessive citations of publications from the same region
- 25-35 references are appropriate for a full text article

Who is the first author?

General principles for who is listed first

- **First Author**:
  - Conducts and/or supervises the data analysis and the proper presentation and interpretation of the results
  - Puts paper together and submits the paper to journal
- **Co-Author(s):**
  - Makes intellectual contributions to the data analysis and contributes to data interpretation
  - Reviews each paper draft
  - Must be able to present the results, defend the implications and discuss study limitations

Abuses to be avoided

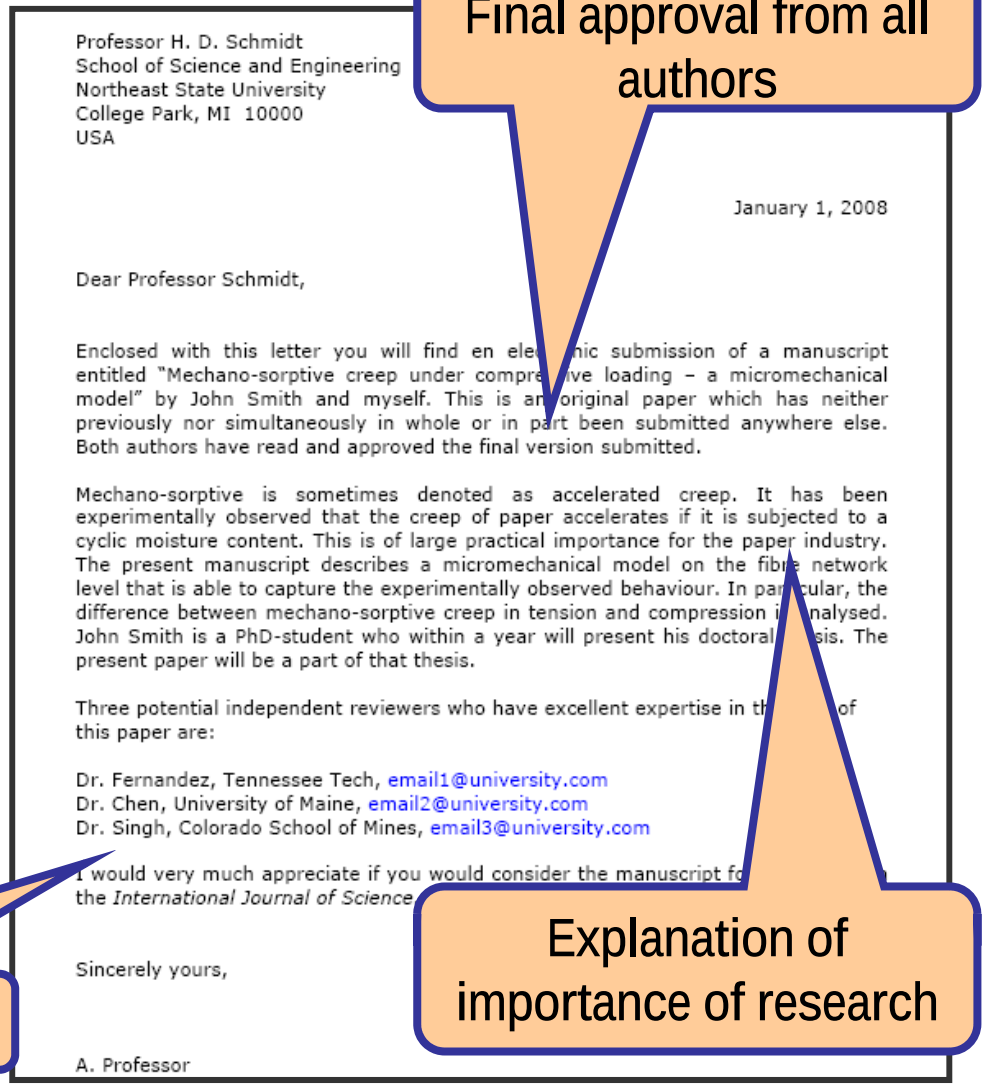
- **Ghost Authors**: leaving out authors who should be included

- **Gift Authors:** including authors when they did not contribute significantly

Cover letter

This is your chance to speak to the editor directly

- Submitted along with your manuscript
- Mention what would make your manuscript special to the journal
- Note special requirements (reviewers, conflicts of interest)
- Indicate approval of all authors for submission



Professor H. D. Schmidt
School of Science and Engineering
Northeast State University
College Park, MI 10000
USA

January 1, 2008

Dear Professor Schmidt,

Enclosed with this letter you will find en elec[illegible]nic submission of a manuscript entitled "Mechano-sorptive creep under compre[illegible]ve loading – a micromechanical model" by John Smith and myself. This is an original paper which has neither previously nor simultaneously in whole or in part been submitted anywhere else. Both authors have read and approved the final version submitted.

Mechano-sorptive is sometimes denoted as accelerated creep. It has been experimentally observed that the creep of paper accelerates if it is subjected to a cyclic moisture content. This is of large practical importance for the paper industry. The present manuscript describes a micromechanical model on the fibre network level that is able to capture the experimentally observed behaviour. In par[illegible]cular, the difference between mechano-sorptive creep in tension and compression i[illegible]nalysed. John Smith is a PhD-student who within a year will present his doctoral [illegible]sis. The present paper will be a part of that thesis.

Three potential independent reviewers who have excellent expertise in th[illegible] of this paper are:

Dr. Fernandez, Tennessee Tech, email1@university.com
Dr. Chen, University of Maine, email2@university.com
Dr. Singh, Colorado School of Mines, email3@university.com

I would very much appreciate if you would consider the manuscript fo[illegible] the *International Journal of Science*

Sincerely yours,

A. Professor

Final approval from all authors

Explanation of importance of research

Suggested reviewers

Final checks before submission

- Ask colleagues to read and be critical
- All requirements from Guide for Authors are met
- Scope of paper is appropriate for journal
- Have your manuscript checked for language, either by a native English speaker or an editing service
- Ensure that the literature cited is balanced and that aims, purpose and significance of results are clear
- Use a spellchecker!

Rejection

Rejection

- Don’t despair – it happens to everybody
- Try to understand WHY, consider reviewers advice
- Be self-critical
- If you want to submit to another journal, begin as if you are going to write a new article. Read the Guide for Authors of the new journal, again and again.

Rejection

Suggested strategy for submitting elsewhere:

- In your cover letter, you can declare that the paper was rejected and name the journal
- Include the referees reports and show how each comment has been addressed
- Explain why you are submitting the paper to this journal; is it a more appropriate journal?

Publication Ethics

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Publication Ethics

X Do not submit to more than one journal at once

X Do not plagiarise or self-plagiarise

X Do not publish a case study or interview without clearing permission

✓ Get permission for figures and tables you have not created

✓ Seek agreement between authors

✓ Disclose any conflict of interest

Authors and editors are supported by the Committee on Publication Ethics (COPE)

Plagiarism

- The act of taking someone else's work and passing it off as your own
- Hard to detect with peer review but there are new tools to help us
- Emerald's entire portfolio is included in iThenticate web-based software from iParadigms http://www.ithenticate.com/
- Emerald's Plagiarism Policy can be seen at http://www.emeraldinsight.com/about/policies/plagiarism.htm
- For more general information visit http://www.plagiarism.org/

Plagiarism in the News

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24 February 2011 Last updated at 11:38

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German minister loses doctorate after plagiarism row

Germany's defence minister has been stripped of his university doctorate after he was found to have copied large parts of his work from others.

Mr Guttenberg failed to name sources for parts of his PhD thesis

Karl-Theodor zu Guttenberg, an aristocrat who lives in a Bavarian castle, admitted breaching standards but denied deliberately cheating.

Analysis revealed that more than half of his thesis had long sections lifted word-for-word from the work of others.

So far the German Chancellor, Angela Merkel, has stood by the minister.

The University of Bayreuth decided that Mr Guttenberg had "violated scientific duties to a considerable extent".

It deplored the fact that he had lifted sections of text without attribution.

Last week Mr Guttenberg said he would temporarily give up his PhD title while the university investigated the charges of plagiarism. He admitted that he had made "serious mistakes".

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Hungarian president resigns over doctorate plagiarism scandal

Pal Schmitt steps down after university revokes doctorate, saying Olympics thesis was mostly copied from two authors

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Associated Press in Budapest
The Guardian, Monday 2 April 2012 13.29 BST

Article history


The Hungarian president, Pal Schmitt, who has announced his resignation. Photograph: Matej Divizna/EPA

The Hungarian president, Pal Schmitt, has announced he will resign after losing his doctorate in a plagiarism scandal.

Schmitt, who was elected to his largely ceremonial office in 2010 for a five-year term, said in a speech at the start of parliament's plenary session that he was stepping down because his "personal issue" was dividing Hungary.

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- Promote through social media channels

Summary and Useful Resources

Beyond Authorship

Other important publishing work that you might wish to get involved in include:

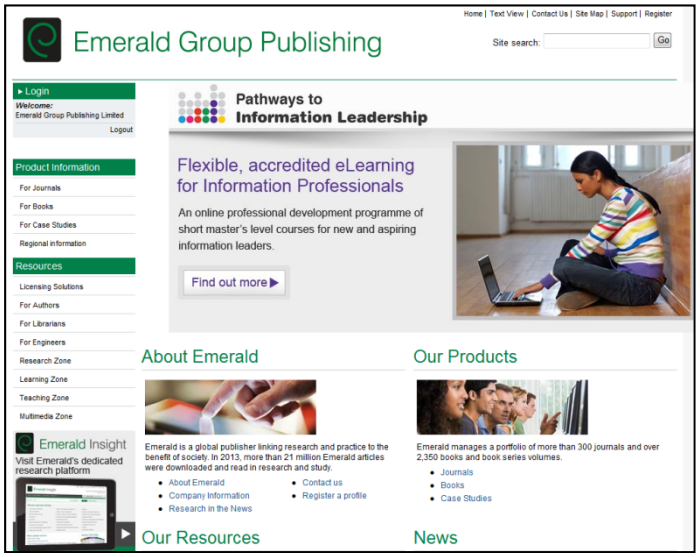
- Book reviewing
- Refereeing/peer review
- Editorial advisory board membership
- Contributing editorship
- Regional editorship
- Editorship
- Interested in proposing a book/series or a journal?

If you would like to be involved – get in touch!

Emerald Resources

www.emeraldgrouppublishing.com

provides numerous resources for authors



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To Summarise….

Keep these points in mind to achieve….

Presentation

Understand your target market

Be ethical

Learn from the review process

In collaboration

Check and check again

Attention to detail

Take your time

Involve your peers

Originality

Now spread the word!

Any Questions…?

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